UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,911	04/19/2002	Torben Bach Pedersen	45900-000718/US	2800

			EXAMINER
30596	7590	10/31/2005	NGUYEN, CINDY

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ART UNIT	PAPER NUMBER
2161	

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/031,911	PEDERSEN ET AL.
	Examiner	Art Unit	
	Cindy Nguyen	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07/05/05</u>.

2a)☒ This action is **FINAL**.　　2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-28_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-28_ is/are rejected.

7)☒ Claim(s) _2-20 and 27_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _19 April 2002_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some *　c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _04/19/02_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

This is in response to amendment filed 07/05/05.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 3, the pronouns (such as i.e., in case it is) are not permitted in the claims,

they are permitted only what is being referred by "that" should be set forth in the claim.

Correction is appreciated by required.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 24 is recite the limitation "wherein a set of pre-aggregation data" in claim

23. There is insufficient antecedent basis for this limitation in the claim. There is no

that limitation in claim 23. Correction is appreciated by required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 11-15, 18-26 and 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Castelli et al. (US 6535872) (Castelli) in view of Pouschine et al. (US

5918232).

Regarding claims 1 and 15, Castelli discloses: 1. A method for transforming a general

on-line analytic processing dimension into an at least partly aggregation normalized dimension.

by means of a computer, the dimension having dimension values organized into categories of

dimension values based o a partial ordering. the dimension comprising mappings of links

between dimension values , the method comprising the steps of

analyzing the mapping to determine irregularities of the dimension by means of

analyzing means executed by the computer (col. 5, lines 5 to col. 6, lines 50, and col. 8, lines

44-62, Castelli),

creating new dimension values   of the dimension and modifying the mapping between

dimensional values of the dimension according to the analysis, whereby the dimension is at

least partly aggregation normalized (col. 4, lines 25 to col. 5, lines 50, Castelli), and

saving the new dimension values and the modified mappings in data storage

means of the computer (col. 9, lines 5-32, Castelli).

However, Castelli didn't disclose: retrieve the mapping from data storage means

associated with the computer. On the other hand, Pounschine discloses: retrieve the

mapping from data storage means associated with the computer (col. 7, lines 60-65,

Pounschine). Thus, at the time invention was made, it would have been obvious to a

person of ordinary skill in the art to include the steps for retrieve the mapping from data

storage means associated with the computer in the system of Castelli as taught by

Pounschine. The motivation being to enable the system provided the mapping rule

associated with the type element describing how and where information exists in and is

retrieved from the database (col. 7, lines 60-64, Pounschine).

Regarding claim 11, all the limitations of this claim have been noted in the rejection of

claim 1 above. In addition, Castelli/Pounschine discloses: plurality of facts mapped on a

plurality of dimensions having dimension values organize into categories of dimension values

base on a partial ordering, the multidimensional objected comprising mappings of links

between dimension values within each dimension (col. 5, lines 29 to col. 6, lines 50, Castelli).

Regarding claim 12, all the limitations of this claim have been noted in the rejection of

claim 11 above. In addition, Castelli/Pounschine discloses: wherein the multidimensional

object comprises a plurality of facts and the mapping comprises links from each of the facts to

at least one dimension value in each of the plurality of dimensions, the facts constituting the

bottom layer of each of the dimensions of the multidimensional object (col. 5, lines 5 to col. 6,

lines 50, Castelli).

Regarding claim 13, all the limitations of this claim have been noted in the rejection of

claim 11 above. In addition, Castelli/Pounschine discloses: comprising the steps selecting a

subset of categories of the one or more dimension to be aggregation normalized (col. 5, lines 5

to col. 6, lines 50, Castelli), and

performing an aggregation normalization of the selected subset, whereby one or more

of the dimensions of the multidimensional object is/are only partly aggregation normalized (col.

5, lines 5 to col. 6, lines 50, Castelli).

Regarding claims 14, all the limitations of this claim have been noted in the rejection of

claims 11 and 13 above. In addition, Castelli/Pounschine discloses: comprising the steps of

selecting specific aggregation functions (sum, count) to be performed on the multidimensional

(col. 4, lines 25- 50, Castelli).

Regarding claim 18, all the limitations of this claim have been noted in the rejection of

claim 15 above. In addition, Castelli/Pounschine discloses: wherein the method comprises the

initial step of making each of the plurality of dimensions aggregation normalized (col. 5, lines 5

to col. 6, lines 50, Castelli).

Regarding claim 19, all the limitations of this claim have been noted in the rejection of

claim 11 above. In addition, Castelli/Pounschine discloses: wherein the created new

dimensional values are marked as such. a pre-aggregation is performed on a multidimensional

object being normalized by means of the computer and the method further comprises the step

of producing a reply to a query made to the system and concerning the multidimensional

object, aggregate queries, exploring the dimension hierarchies, as well as navigation queries,

that summarize the data at various levels of detail, in which reply the existence of the created

new dimensional values is transparent (col. 5, lines 5 to col. 6, lines 50, Castelli).

Regarding claim 20, all the limitations of this claim have been noted in the rejection of claim 11 above. In addition, Castelli/Pounschine discloses: implementing, into the aggregation normalized multidimensional object, of new facts including mapping of the facts onto the dimension. of new dimension values of the dimensions, or of new mapping between some of the dimension values, by which implementation irregularities of the multidimensional object is introduced, analyzing the introduced irregularities of the dimensions of the multidimensional object (col. 5, lines 5 to col. 6, lines 50, Castelli).

Regarding claim 21, all the limitations of this claim have been noted in the rejection of claim 11 above. In addition, Castelli/Pounschine discloses: at least one general purpose computer having data storage means associated therewith on which data storage means is stored a computer programme product suitable for adapting the computer to means perform an at least partly aggregation normalization of a multidimensional object according to means for retrieving the computer programme product and perform accordingly (col. 5, lines 5 to col. 6, lines 50, Castelli).

Regarding claim 22, all the limitations of this claim have been noted in the rejection of claim 11 above. In addition, Castelli/Pounschine discloses: A computer programme product suitable for adapting a general purpose computer to perform an at least partly aggregation normalization of a multidimensional object (col. 5, lines 5 to col. 6, lines 50, Castelli).

Regarding claim 23, all the limitations of this claim have been noted in the rejection of claims 1 and 19 above. In addition, Castelli/Pounschine discloses: Castelli/Pounschine discloses a computer system for on-line analytical processing having data storage means

associated therewith on which a multidimensional object is stored, the multidimensional object including: a set of fact comprising a plurality of facts (col. 5, lines 5 to col. 6, lines 50, Castelli);

a first plurality of dimensions (time dimensions) having dimension values (time key) being organized into categories of dimension values based on a partial ordering and comprising a first mapping of links between dimension values within each dimension of the first plurality of dimensions as -11 as links between the facts and the dimensions of the first plurality of dimensions at least one of the dimensions of the first plurality of dimensions being irregular (col. 5, lines 5 to col. 6, lines 50, Castelli);

a second plurality of dimensions having dimension n values being organized into categories of dimension values based on a partial ordering and comprising a second mapping of links between dimension values within each dimension of the second plurality of dimensions as well as links between the fads and the dimensions of the second plurality of dimensions, each of the second plurality of dimensions being aggregation normalized (col. 5, lines 5 to col. 6, lines 50, Castelli),

the computer system comprising a query handle component being adapted for producing replies to queries made to the computer system and concerning the multidimensional object the replies to navigation queries being based on the first set of dimensions and the replies to aggregate queries being based on the second set of dimensions (col. 5, lines 5 to col. 6, lines 50, Castelli)

Regarding claim 24, all the limitations of this claim have been noted in the rejection of claim 23 above. In addition, Castelli/Pounschine discloses: wherein a set of pre-aggregation

data relating to the second plurality of dimensions is further stored within the data storage

means and the replies to aggregate queries furthermore are based on the set of pre-

aggregation data (col. 5, lines 5 to col. 6, lines 50, Castelli).

Regarding claim 25, all the limitations of this claim have been noted in the rejection of

claim 23 above. In addition, Castelli/Pounschine discloses: wherein the query handler

component is adapted for producing replies to aggregate queries in which replies the existence

of the second plurality of dimensions is transparent (col. 5, lines 5 to col. 6, lines 50, Castelli).

Regarding claim 26, all the limitations of this claim have been noted in the rejection of

claim 23 above. In addition, Castelli/Pounschine discloses: wherein the query handler

component is adapted for transforming aggregate queries made to the first plurality of

dimensions into queries for the second set of dimensions and transforming replies based on

the second set of dimensions into replies as based on the first set of dimensions, thus making

the existence of the second plurality of transparent in the produced reply (col. 5, lines 5 to col.

6, lines 50, Castelli).

Regarding claim 28, all the limitations of this claim have been noted in the rejection of

claim 23 above. In addition, Castelli/Pounschine discloses: further comprising means adapted

for performing an at least partly aggregation normalization of a multidimensional object (col.

5, lines 5 to col. 6, lines 50, Castelli).

Allowable Subject Matter

Claims 2-10, 16, 17 and 27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior arts failed to suggest/discloses: the method for transforming A method for transforming a general on-line analytic processing dimension into an at least partly aggregation normalized dimension by means of a computer, the dimension having dimension values organized into categories of dimension values based o a partial ordering, the dimension comprising mappings of links between dimension value , the method comprising the steps of executing a covering procedure, executing a make-strict procedure, executing make-onto procedure as recited in claims 2-6, 16 and 17, respectively.

The following is a statement of reasons for the indication of allowable subject matter: the prior arts failed to suggest/discloses: a computer system for on-line analytical processing having data storage means associated therewith on which a multidimensional object is stored, the multidimensional object, wherein multidimensional object is stored within the data storage means of computer system in tables organized as a combination of star schemas for the part of the multidimensional object containing only strict mappings, and additional tables containing the non-strict part of the mappings as recited in claim 27.

As per claims 7-10, these claims are depended on claims 3 and 4 respectively. It is therefore objectable as set forth above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cindy Nguyen
September 24, 2005

FRANTZ COBY
PRIMARY EXAMINER